parently little else than skin and bones. The consequence was it took all summer long to recruit. The milk they gave was poor, and it was small in amount, and consequently costly. That is, it took a great deal of feed for a little milk. A little illustration will show how this works. To make the case as plain and definite as possible I will suppose a herd of cows, when in full milk, are living on good hay.

The food which it takes to support the daily waste of body varies a little with individual animals, but as a fair average it takes, when cattle are as comfortable as when the air is at 60 degrees, one pound of good hay a day for every 50 lbs. of live weight. If the cows weigh 1000 lbs. live weight it will take 20 lbs. of good hay, or its equivalent in other food, to keep each cow a day without gaining or losing. If they are fed just 20 lbs. a day they can give no milk except at a sacrifice of their own flesh and fat which would have to be restored and the feeding would all be done at a loss whatever might be its cost.

But suppose you feed 25 lbs. a day or an equivalent of other food, there will be 5 lbs. to spare for milk. A pound of good hay contains the material according to the chemical tables, for 2¾ lbs. of milk. Which is a little over a quart. But as animals seldom utilize all that the tables shew we may put the milk for a pound of hay at an even quart which will be very near the truth. With 25 lbs. a day we have 20 for support, 5 for milk, which will give five quarts a day, 5 lbs. to one quart. If the hay is worth $5 a ton, 25 lbs. will cost 6¼ cents and the milk 1¼ cents a quart.

If the cows have 30 lbs. a day they can give 10 quarts each, and the milk will be furnished at the rate of one quart for every 3 lbs. of hay consumed, and at a cost of 3¾ cents per quart.

Suppose by crowding a little, or giving richer food, we could get the cows to eat and digest 35 lbs. a day they could give 15 quarts each or a quart for every 2⅓ lbs of hay and at a cost of 8¾ cents or 7-12 cents per quart.

For convenience in comparison we will tabulate these facts.

Hay lbs. fed.	Qts. milk.	Hay per qt.	Cost at $5 ton.	Cost of milk per qt.
35	15	2⅓	8¾ cts.	7-12 cts.
30	10	3	7½ "	¾ "
25	5	5	6¼ "	1¼ "
20	0	—	5	5 no qt.

In the first instance, with hay at $10 a ton and milk at two cents a quart, milk could be produced at a profit so far as cost of feed is concerned—for the 15 quarts would cost but 17½ cents in hay. In the second instance 10 quarts would cost 15 cents but are worth 20 cents, and there is still a gain of 5 cents per cow. In the third instance the daily ration of 25 lbs. would be worth 12½ cents and the milk 10 cents, making a daily loss of 2½ cents per cow.

When the food becomes grass, which is supposed to be cheaper than hay, even at $5 a ton, the cost of milk by the selection of cows, with naturally large milking capacity, by feeding and good care of stock in winter so that the animals shall not be required to devote their food to flesh forming instead of to milk, the cost of milk can be so reduced as to make dairying a paying business even at the prices paid last summer for good cheese.

It is in this direction of selection, care and feeding, that the variable elements of profit in dairying lie, and it is the place for the farmer to turn his attention to widen the difference between the price of a pound of cheese and the cost of the milk to produce it.—(Applause.)

DISCUSSION.

Mr. J. Clark—Will Mr. Arnold tell me what is the best food to produce milk?

Mr. Arnold—The answer to that, I think, was pretty well brought out to-day on the discussion on grass, green or dry.